ONGC and Indian Oil join hands to reduce carbon emission and enhance oil recovery

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ONGC signed an MoU with IOCL for CO2 based Enhanced Oil Recovery (EOR) by injecting CO2 captured from IOCL’s Koyali refinery. The MOU is aimed to establish a framework for mutually beneficial cooperation in the area of CO2-EOR as a mode of CCUS. The common objective is to address some of the biggest challenges of our country in particular & world at large, namely energy security and climate change.

It is a landmark event in the history of Indian Hydrocarbon Industry, with two its largest conglomerates agreeing to jointly work on Carbon Capture Utilization and Storage (CCUS). CCUS is known to be a very effective method of EOR globally and is playing an increasingly important role in achieving the mission of carbon neutrality. The idea of the MOU is to replicate the global success story in India.

MOU signed between ONGC and Indian Oil for CO2 based Enhanced Oil Recovery (EOR) by injecting CO2 captured from IOCL’s Koyali refinery
The collaboration under this MoU focuses on development of CO2 Capture plant at IOCL’s Koyali Refinery with appropriate Carbon capture technology, development of business model, increasing domestic oil production through CO2-EOR in Gandhar field and inclusion of this project as part of national emission curtailment measure aimed at supporting country’s low-carbon development goals.

In order to replicate global success story of CO2-EOR from anthropogenic sources in India, the Institute of Reservoir Studies (IRS), ONGC has carried out laboratory and numerical simulation studies for Gandhar field. Technical feasibility of CO2-EOR has been established, and is indicative of incremental oil recovery of approximately 10%.

The project will add up a new dimension towards national vision of CCUS and will infuse a new life to the depleted matured oil fields of ONGC. The learning curve from this endeavor shall create a knowledge base to further expand deployment of CCUS in India. The success of CCUS in India will not only increase domestic oil production, but also cater to address India’s Nationally Determined Contributions of reducing the emission intensity of GDP by 33-35% by 2030 as per Paris agreement.

The MOU was signed by Mr AK Dwivedi, Director (Exploration), ONGC and Mr BV Ramgopal, Director (Refinery), IOCL in the presence of Mr S K Moitra, Director (Onshore), ONGC, Dr Alka Mittal, Director (HR), ONGC, Dr SSV Ramakumar, Director (R&D), IOCL and Mr Srikanth Vaidya, Director (Refinery – designate), IOCL.